

IN THE SPECIFICATION

Please replace the paragraphs in the specification with the amended paragraphs as follows:

**Page 1, lines 5-11:**

This invention is related to simultaneously filed U.S. Patent Application[[s]] Serial No[[s]]. 09/772,287(Attorney Docket No. DIVA 253) and \_\_\_\_\_ (Attorney Docket No. 256), filed on the same date as this application, and such applications are herein incorporated by reference in their entirety entireties.

**Page 3, lines 17-22:**

FIG. 1 depicts a high level block diagram of an interactive information distribution system 100. One application of the distribution system 100 is as a video of demand (VOD) system, as described in U.S. Patent Application No. 08/984,710, filed December 3, 1997, 6,253,375 and incorporated herein by reference. In such a VOD system 100, a user may request and receive a particular content selection, e.g., video, movie or programming content, from a service provider without any time restrictions associated with normal cable programming.

**Page 3, line 23 through page 4, line 4:**

The information distribution system 100 comprises a stream caching server 102, a stream distribution network 104, at least one access network and at least one subscriber terminal. The stream caching server 102 receives, stores and streams content in accordance to an Internet Protocol (IP). One example of such a stream caching server 102 is disclosed in simultaneously filed U.S. Application 09/772,287, ~~attorney docket DIVA 253~~, entitled "Method and Apparatus for Streaming Content in an Interactive Information Distribution System, which is herein incorporated by reference. The content is configured within a payload portion of each IP packet received, stored and streamed by the stream caching server 102. The use of this IP formatted content enables a single stream caching server 102 to stream content via an integrated stream

distribution network 104 to different types of access networks. As such, the system 100 is capable of streaming the same content to any cable service subscriber or any person using the Internet.

**Page 5, lines 20-24:**

For the embodiment shown in FIGS. ~~3A-3B~~2A-2B, the transcoding may also include compression of the IP header 310, the UDP header 322 and the RTP header 340. The compression of these headers 310, 322 and 340 optimizes the storage of content on the storage medium 146 of the stream caching server 102. Additionally, the transcoding may include encryption of the content.

**Page 6, lines 14-22:**

The preprocessing of the present invention is not limited to a computer terminal 116 uploading content over a LAN/WAN 106. For example, the encapsulation may also occur in the computer terminal 116 prior to uploading to content to the http server 148. Additionally, the preprocessing may be initiated from a computer terminal 122 or digital video recorder 124 over a carrier network 108, e.g., a T-1 or T-3 line. As such, a user of any computer terminal 116 and 122 may author multimedia content over a network, e.g., Internet, and store the content in a virtual video shelf at the stream caching server 102 for playback by other users. The preprocessing is also applicable to content from a content provider such as a movie manufacturer.

**Page 10, lines 10-19:**

The infrastructure system manager 140 coordinates a (user) request from the subscriber terminal by passing the request to the stream caching server 102 and establishing a session between the subscriber terminal and the stream caching server 102. An exemplary infrastructure system manager 140 is the DIVA System Manager (DSM)[[. ]], ~~As~~as disclosed in U.S. Application 09/772,287, ~~Attorney docket DIVA 256,~~ entitled "~~Method and Apparatus for Managing an Integrated Information Distribution System~~", which is ~~fully incorporated by reference in its entirety.~~ The switch 142 routes the user request from the stream distribution network 104 to the system manager 140.

Additionally, the switch 142 routes the retrieved content from the stream caching server 102 to the packet processor 144.

**Page 10, lines 20-26:**

The storage medium 148 stores the preprocessed content in an IP format. The content is configured as a plurality of MPEG, e.g., MPEG-2 or MPEG-4, packets contained in a payload of a RTP packet within an IP packet. For example, the payload of each RTP packet may contain five MPEG-2 packets. The structure of the IP packet is shown to FIG. 3B2B. The RTP format (RFC 1889) minimizes the latency in streaming content from the server, by supporting the streaming of content in real time. Additionally, the content in the IP packet can be configured to have a minimal Quality of Service (QoS), e.g., data latency.

**Page 10, line 27 through page 11, line 4:**

The packet processor 144 postprocesses the content into a format supported by a particular type of player and access network 106, 108 and 110 used to receive the content from the stream caching server 102. Such a player is either a software module downloaded from a HTTP server 446148 to a computer terminal 122, a hardware module coupled to a subscriber terminal, or a card inserted into a subscriber terminal. Exemplary players include a MPEG-1 player, a MPEG-2 player, a MPEG-4 player, a Microsoft Media Player, a Real Video/Real Audio Player, a QuickTime Player, a Wireless Device Video or Audio Player, and the like.

**Page 11, lines 5-12:**

The packet processor 144 transcodes the content ~~is performed without~~ disturbing the IP format. For example, the packet processor 144 separates the content, e.g., MPEG-2 packets, and header information in the IP packet, transcodes the content packets into a desired format supported by the access network and downstream player, and combines the transcoded packets with the header information to recreate the IP packet. Such transcoding is performed at an elementary packet level for transmitting at the transport packet level. Additional functions performed by the packet processor 144

include jitter correction, creating of a PES (packet elementary stream), stream splicing, and statistical multiplexing.

**Page 12, line 28 through page 13, line 5:**

~~FIG. 2 depicts another portion of the interactive information distribution system 400 of FIG. 1. This~~In another embodiment of FIG. 1, a portion of the system 100 comprises the stream caching server 102 and the infrastructure system manager 140 at the local head end 138, as well as a remote stream caching server 202160 and an infrastructure system manager 204162 at a remote head end 206164, and a backbone streaming network 240166. The stream caching server 202160 and the infrastructure system manager 204162 at the remote head end 206164 operates in a similar manner to the respective stream caching server 102 and the infrastructure system manager 140 at the local head end 138 that were previously described.

**Page 13, lines 6-12:**

The local infrastructure system manager 140 receives a request for a particular content selection and determines whether a user requested content selection is stored in the storage medium 148. If the request content is not in the storage medium 148, the local infrastructure system manager 140 identifies a remote stream caching server 202160 that stores the requested program content and provides a (server) request to the remote system manager 204162. For example, a local system manager 140 in San Francisco may request content from another remote remotely located server 202160 in Boston.

**Page 13, lines 13-18:**

In response to this server request, the local system manager 140 coordinates the streaming remote stream caching server 202160 streams the requested program content over the backbone streaming network 240166 to the local stream caching server 102. The content is then streamed to the subscriber. If the local system manager 140 determines that there are enough user requests above some

predetermined threshold number, then the content from the remote stream caching server 202160 is also stored in the local stream caching server 102.

**Page 15, line 17 through Page 16, line 2:**

At step 512, a query determines whether the downloaded player supports playback (of content) at full quality. If the player does not support playing of content at full quality, the method 500 proceeds to step 526. If the player supports playing of content at full quality, the method ~~400~~500 proceeds to step 514, where a query determines whether the user has paid to view a full quality version of the content, e.g., a program content file. If the user has paid to view the full quality version of the program content, the method 500 proceeds to retrieve the full IP formatted content from the stream caching server 102 at step 516 and streams the retrieved content over the distribution network 104 at step 518. The method 500 proceeds to step 520, where the data link converter 112, 118 or 126 extracts the content (at the transport level) from the IP packets, content or MPEG-2 packets from the IP formatted content. At step 522, a query determines whether to transcode the extracted content. Such transcoding is required to satisfy constraints in (downstream) transmitting the content over the access network 106, 108 and 110, and for playing the content on the viewer. If transcoding is not required, the method 400 proceeds to step 536. If transcoding is required, the method 400 transcodes the content at normal quality at step 524 and proceeds to step 536.